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recreation area planners

... soil surveys
can help you



Soil Conservation Service
U.S. Department of Agriculture

RECREATION AREA PLANNERS

More ski resorts, dude ranches, camps, parks, picnic areas, and other private and public recreation areas are needed to meet the growing demand for recreation. But just because recreation is for fun does not mean the selection and layout of areas can be haphazard. Soil suitability and limitations should be considered in planning recreation areas.

This pamphlet tells how soil surveys available from the Soil Conservation Service can help you select tracts suitable for recreation development and plan adequate conservation to insure that the areas remain attractive and usable.

Why Soil Data Are Needed

It cannot be assumed that just any piece of land can be used for recreation. Some soils are as unsuitable for recreation as they are for supporting buildings or for growing oranges. Among the soil properties that affect recreation uses are the following.



Demand for recreation areas is growing. Soil surveys can help you select, lay out, and maintain areas for many recreation uses.





Soil surveys can help in selecting areas suitable for manmade ponds.



Soil surveys can help hunting reserve owners manage land for wildlife.



Sport may be seasonal, but conservation is needed year round. A conservation plan could have prevented erosion on this ski slope.



Soil surveys can help in planning resorts, camps, and other recreation areas.

Rocks, steep slopes, and sparse vegetation make this area poorly suited to camping.

Flood hazard severely limits use of soils for camps and recreation buildings, but such soils are suitable for hiking and nature study and other less intensive uses.

High water tables impose severe limitations on use of soils for campsites, roads and trails, playgrounds, and picnic areas.

Droughtiness makes it difficult to grow grass needed to prevent erosion, and droughty soils may require irrigation to maintain vegetation.

Some clayey soils swell when wet and shrink when dry. This shrinking and swelling may damage floors and foundations of recreation buildings. Such soils may fail to support roads and other structures unless special design is used.

Steep slopes limit the use of soils for playgrounds, campsites, buildings, roads, and trails, but are appropriate for hiking areas.

If bedrock is at shallow depth, it is difficult to level soils for playgrounds and campsites, to construct roads and trails, and to establish vegetation. Shallow soils are poorly suited for uses that require extensive grading.

A clayey or sandy surface layer makes some soils undesirable for playgrounds, campsites, or other uses that require heavy foot traffic.



Soils high in clay content are sticky when wet and remain wet for long periods after rains. Loose sandy soils are unstable and dusty when dry. Sandy loam and loam soils are the most suitable for recreation uses that require heavy foot traffic.

Stones, gravel, and rocks impose moderate to severe limitations on use of soils for campsites, playgrounds, trails, and other uses that require heavy foot traffic.

The absorptive capacity of soils determines whether a septic tank absorption field will work. The soil should be deep and permeable, there should be no seasonal high water table, the slope should not be steep, and there should be no danger of flooding.

Suitability for impounding water determines whether the soil can be used for manmade fishponds. Ponds are desirable for other recreation uses, such as shooting preserves, dude ranches, vacation farms, and wildlife and nature study areas. Soils suited to manmade ponds generally are deep, have low permeability when compacted, are not steep, and have a low susceptibility to piping.

Selecting Recreation Areas

Published soil surveys of many counties throughout the United States are available from the Soil Conservation Service. In each soil survey, the local soils are delineated on maps and their properties are described. Soil surveys can help you select areas suitable for a wide range of recreation uses, including the following:

- wetland refuges for waterfowl
- wildlife management
- open space or nature study areas
- parks
- athletic fields
- ski areas
- golf courses
- campsites, hiking trails, and picnic areas
- dude ranches
- woodlands
- hunting reserves
- manmade ponds

Maintaining Recreation Areas

For the manager of a ski resort, dude ranch, camp, park, picnic area, playground, or other private or public recreation area, a soil survey can provide information necessary for planning a conservation program to protect the area against erosion and other kinds of site damage.

A soil survey can guide you in selecting a use for each area, based on the suitability of the soil. For example, soils that are susceptible to erosion can be planted to trees, shrubs, and grasses and used in a nonintensive way, such as for nature study. Loamy, well-drained soils can be used for play areas and other uses that require heavy foot traffic.

A soil survey also helps in determining the kind of conservation measures needed to protect the soils while in use. Soil information, which for many years has helped farmers and ranchers prepare conservation plans, can also be used by a camp operator or manager of any recreation area. Vegetation adapted to the soil can be selected and planted to protect the soil from erosion. Dams, terraces, diversions, waterways, and other mechanical measures to control water runoff can be installed in critical areas. In wet areas, if the soil and topography permit and if outlets are available, drains can be installed.

How to Obtain a Soil Survey

To determine whether a soil survey of the area that interests you is available, call the local office of the Soil Conservation Service. If the soil survey has not been published, you can arrange to look at maps that are completed. You may live in a conservation district where soil scientists and soil conservationists are available to discuss recreation use of soils with you.

Issued September 1974

For sale by the Superintendent of Documents
U.S. Government Printing Office, Washington, D.C. 20402
Price 25 cents Stock Number 0100-02916